KORNEV, K.A. [Korniev, K.A.]; YANCHEVSKIY, V.A. [IAnchevs'kyi, V.A.]; GREKOV, A.P. [Hriekov, A.P.]

Kinetics of polycondensation of hydrazides of dibasic carbocylic acids with dicarboxylic acids. Dop. AN URSR no.8:1080-1084 '64. (MIRA 17:8)

1. Institut khimii polimerov i monomerov AN UkrSSR.
2. Chlen-korrespondent AN UkrSSR (for Kornev).

YANOVSKIY, V.A.; GLUKOV, A.P.; [illegible], Y.A.

Reactions of condensation with hydrazine derivatives. Part 1: Kinetics of aliphatic dicarboxylic acid reactions with dihydrazide of sebacic acid in *m*-cresol. Zhur. org. khim. 1 no.1:40-44 Ja '65. (MIRA 18:5)

1. Institut khimii polimerov i monomerov AN UkrSSR.

GREKOV, A.P.; SUKHORUKOVA, S.A.; KORNEV, K.A.

Polymerization of ε-caprolactam in the presence of polyoctamethyleneamino-1,2,4-triazole. Vysokom. soed. 7 no.2:255-258 F '65. (MIRA 18:3)

1. Institut khimii polimerov i monomerov AN UkrSSR.

GREKOV, A.P. [Hrekov, A.P.]; SUKHORUKOVA, S.A.

New copolymers of capron. Khim. prom. [Ukr.] no.3:60 JI-S '64.
(MIRA 17:12)

[redacted], V.A.; [redacted], A.F.; KORNEV, K.A.

Condensation reactions with hydrazine derivatives. Part 1: Kinetics of the reaction of sebacic acid hydrazide with sebacic acid in m-cresol. Ukr. khim. zhur. 31 no.3:290-297 '65. (MIRA 18:4)

1. Institut khimii vysokomolekulyarnykh soyedineniy AN UkrSSR.

L 51497-65 EPF(c)/EWP(j)/EWA(c)/EWT(m) Pc-4/Pr-4 RM
ACCESSION NR: AP5016621 UR/0191/64/000/008/0050/0051

22
B

AUTHOR: Grekov, A. P.; Sukhorukova, S. A.; Kornev, K. A.

TITLE: Method of determining the molecular weight of polyaminotriazoles by terminal groups

SOURCE: Plasticheskiye massy, no. 8, 1964, 50-51

TOPIC TAGS: molecular weight, organic nitrogen compound, macromolecular chemistry

ABSTRACT: A chemical method was de eloped for the determination of the average molecular weight of polyaminotriazoles based on potentiometric titration of the terminal hydrazide groups with potassium iodate in sulfuric acid. The reaction proceeds rapidly and quantitatively, with a distinct potential drop at the equivalence point. The amino group bound to the heterocyclic ring did not react with potassium iodate. The results of the new method were compared with potentiometric titration with sodium nitrite in sulfuric acid and gave good coincidence of results. An empirical equation is graphically derived for the relationship between the intrinsic viscosity and the

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L 51497-65

ACCESSION NR: AP5016621

molecular weight. There was satisfactory agreement between molecular weights found by the terminal groups method and that calculated according to the equation. Orig. art. has: 1 figure, 1 graph, 1 table.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 001 OTHER: 003 JPRS

Card 2/2 mb

ACCESSION NR: AP4043733 S/0021/64/000/008/1080/1084

AUTHOR: Kornyev, K. A. (Kornev, K. A.)(Corresponding member AN UkrSSR); Yanchevs'ky*y, V. A. (Yanchevskiy, V. A.); Gryekov, A. P. (Grekov, A. P.)

TITLE: Kinetics of the polycondensation of dihydroxylic acid dihydrazides with dicarboxylic acids

SOURCE: AN UkrRSR. Dopovidi, no. 8, 1964, 1080-1084

TOPIC TAGS: polycondensation, polycondensation kinetics, sebacic acid dihydrazide, sebacic acid, adipic acid, polyazide

ABSTRACT: The kinetics of the polycondensation of sebacic acid dihydrazide with adipic or sebacic acid in m-cresol has been studied at 140, 160, and 180C. The study was undertaken because polyazides of carboxylic acids exhibit valuable properties (stability to acids, alkalis, and organic solvents and heat resistance) and form fibers and films and because of the absence of data on the kinetics of this polycondensation. The study showed that the polycondensation obeys a second-order equation and proceeds through the step of the forma-

Card 1/2

ACCESSION NR: AP4043733

tion of the reaction products of one molecule of the dihydrazide with one molecule of the acid ("dimer" step). The rate constants, the activation energies, and the entropies of activation of the "dimer" and "polymer" steps were determined. Orig. art. has: 2 figures and 1 table.

ASSOCIATION: Insty*tut khimiyi polimeriv i monomeriv AN UkrSSR (Institute of the Chemistry of Polymers and Monomers, AN UkrSSR)

SUBMITTED: 06Dec63 ENCL: 00

SUB CODE: OC, GC NO REF SOV: 008 OTHER: 004

Card 2/2

GREKOV, A.P.; YANCHEVSKIY, V.A.; KORNEV, K.A.

Quantitative determination of hydrazides of dibasic carboxylic acids by potentiometric titration with sodium nitrite. Zhur. anal. khim. 19 no.2:260-261 '64.
(MIRA 17:9)

1. Institut khimii polimerov i monomerov AN UkrSSR, Kiyev.

NESYNOV, Ye.P.; GREKOV, A.P.

Chemistry of 1,3,4-oxadiazole derivatives. Usp. khim. 33 no.10: 1184-1197 O '64. (MIRA 17:11)

1. Institut organicheskoy khimii i Institut khimii polimerov i monomerov AN UkrSSR.

L 51861-65 EWT(m)/EPF(c)/EWP(j)/T/EWA(c) Pc-4/Pr-4 GS/RM

ACCESSION NR: AT5002658 S/0000/64/000/000/0034/0038

AUTHOR: Yanchevskiy, V.A.; Grekov, A.P.; Kornev, K.A.

TITLE: Synthesis and study of some polyhydrazides of dicarboxylic acids

SOURCE: ANUkrSSR. Institut khimii vysokomolekulyarnykh soyedineniy. Sintez i fiziko-khimiya polimerov; sbornik statey po resul'tatam naucho-issledovatel'skikh rabot (Synthesis and physical chemistry of polymers; collection of articles on the results of scientific research work). Kiev, Naukova dumka, 1964, 34-38

TOPIC TAGS: polycondensation, dicarboxylic acid polyhydrazide, polyhydrazide thermomechanical property

ABSTRACT: The authors polycondensed hydrazine and hydrazides with dibasic carboxylic acids, their esters and acid chlorides. The best results were obtained with hydrazides polycondensed under pressure, in an autoclave, at 200-210C and a reaction time of several hours. Six new polyhydrazides were synthesized (polymerization level 15-20, m.p. 235-320C, specific viscosity 0.13-0.16) and exhibited improved stability to acids, alkalies and organic solvents. The synthesized materials were tested for thermal stability and thermomechanical properties, and the results are shown graphically. Orig. art. has: 1 table, 3 figures and 1 formula.

Card 1/2

L 51861-65

ACCESSION NR: AT5002658

ASSOCIATION: Institut khimii vysokomolekulyarnykh soyedineniy AN UkrSSR (Institute of the Chemistry of High Polymers, AN UkrSSR)

SUBMITTED: 22Jun64 ENCL: 00 SUB CODE: OC,GC

NO REF SOV: 000 OTHER: 008

Card 2/2

L 51860-65 EWT(m)/EPF(c)/EPR/EWP(j)/T/EWA(c) Pc-4/Pr-4/Ps-4 WW/GS/RM

ACCESSION NR: AT5002659 S/0000/64/000/000/0039/0044

AUTHOR: Grekov, A.P.; Malyutenko, S.A.; Kornev, K.A.

TITLE: Synthesis and study of polyaminotriazoles-1,2,4

SOURCE: AN UkrSSR. Institut khimii vysokomolekulyarnykh soyedineniy. Sintez i fiziko-khimiya polimerov; sbornik statey po rezul'tatam nauchno-issledovatel'skikh rabot (Synthesis and physical chemistry of polymers; collection of articles on the results of scientific research work). Kiev, Naukova dumka, 1964, 39-44

TOPIC TAGS: polyaminotriazole synthesis, dicarboxylic acid, dihydrazide, polyhydrazide, aminotriazole polymerization

ABSTRACT: Ten simple or compound polyaminotriazoles were synthesized from mixtures of hydrazine hydrate with adipic, azelaic, sebacic, isophthalic, succinic or pimelic acids, the dihydrazides of dicarboxylic acids or polyhydrazides. The use of aromatic solvents (cresol, decalin) and an inert gas in the polymerization process improved product quality by inhibiting its oxidation. The authors describe the color, solubility, melting point, specific viscosity and molecular weight and present graphs showing the thermal stability and thermomechanical properties of the synthesized materials. Orig. art. has: 1 table, 3 figures and 1 formula.

Card 1/2

L 51860-65

ACCESSION NR: AT5002659

ASSOCIATION: Institut khimii vysokomolekulyarnykh soyedineniy AN UkrSSR (Institute of the Chemistry of High Polymers, AN UkrSSR)

SUBMITTED: 22Jun64 ENCL: 00 SUB CODE: OC ,GC

NO REF SOV: 004 OTHER: 019

Card 2/2

L 36289-65 EWT(m)/EWP(j) Pc-4 RM

ACCESSION NR: AP5008148 S/0286/65/000/005/0024/0024

AUTHORS: Grekov, A. P.; Kornev, K. A.; Yanchevskiy, V. A.

TITLE: A method for purifying ε-caprolactam. Class 12, No. 168705

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 5, 1965, 24

TOPIC TAGS: caprolactam, monomer, acetic anhydride, acetic acid, sodium hydroxide

ABSTRACT: This Author Certificate introduces a method for purifying ε-caprolactam by distillation in a vacuum, preceded by a chemical treatment with acid and alkaline agents. To increase the degree of purity of the monomer, the commercial produot is treated at the temperature of 95C with a mixture of acetic anhydride, acetic acid, and solid sodium hydroxide. These reagents are used in the amounts of 0.5%, 0.25%, and 2% by the weight of caprolactam.

ASSOCIATION: none

SUBMITTED: 18Apr62 ENCL: 00 SUB CODE: OC

NO REF SOV: 000 OTHER: 000

Card 1/1

L 35485-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 RPL WW/RM
ACCESSION NR: AP5005594 S/0190/65/007/002/0255/0258

AUTHORS: Grekov, A. P.; Sukhorukova, S. A.; Kornev, K. A.

TITLE: Polymerization of ε-caprolactam in the presence of polyoctamethylenamino-1,2,4-triazole

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 2, 1965, 255-258

TOPIC TAGS: caprolactam, polymerization

ABSTRACT: The polymerization of ε-caprolactam in the presence of different amounts of polyoctamethylenamino-1,2,4-triazole (PAT) as a function of its polymerization constant was investigated at temperatures of 235-280C. The PAT was prepared by the method described by A. P. Grekov, S. A. Malyutenko, and K. A. Kornev (Sintez i fiziko-khimiya polimerov, Izd. AN UkrSSR, 1964) and was heated with ε-caprolactam. After a time, the polymerization was interrupted and 1.5-g samples were boiled in 200 ml water for 2 hours. The insoluble portion was dried at 100C, and its characteristic viscosity was determined in H_2SO_4 at 25C. By performing some auxiliary reactions, it was found that only the end groups of the PAT appear as polymerization initiators. The yield was found to be 92-95%, with an induction period which decreased from about 20 to 2 hours as the PAT content

Card 1/2

L 35485-65

ACCESSION NR: AP5005594

was increased from 0.5 to 20% mol (at 250C). The characteristic viscosity reached a maximum after the induction period and remained about constant after that ($\eta \approx 1.5$ for PAT = 0.5%; ≈ 0.8 for 10%). Increasing the reaction temperature from 235 to 280C reduced the induction period from ≈ 20 to ≈ 10 hours, but left the yield essentially the same. It was found that the yield and the characteristic viscosity of the copolymer behaved linearly as a function of PAT viscosity (at 250C), decreasing from 75-45% and increasing from 1.5 to 3 respectively as PAT viscosity was increased from 0.3 to 0.6 (2% mol. PAT). Thus the yield and characteristic viscosity of the copolymer depend on the polymerization coefficient of PAT. Orig. art. has: 6 figures.

ASSOCIATION: Institut khimii polimerov i monomerov AN UkrSSR (Institute of Polymer and Copolymer Chemistry, AN UkrSSR)

SUBMITTED: 11Apr64 ENCL: 00 SUB CODE: OC

NO REF SOV: 002 OTHER: 004

Card 2/2

NAGORNAYA, L.I.; MNATSAKANOVA, T.R.; GREKOV, A.P.; SHVAYKA, O.P.

Photoluminescence and scintillation properties of certain 1,3,4-oxadiazole derivatives. Opt. i spektr. 18 no.3:403-406 Mr '65. (MIRA 18:5)

L 42146-65 EPF(c)/EWP(j)/EWA(c)/EWT(m)/T Pc-4/Pr-4 RM

ACCESSION NR: AP5008059 S/0073/65/031/003/0290/0297

23
21
B

AUTHORS: Yanchevskiy, V. A.; Grekov, A. P.; Kornev, K. A.

TITLE: Condensation reactions with hydrazine derivatives. 1. Kinetics of the reaction between sebacic acid dihydrazide and sebacic acid in m-cresol

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 31, no. 3, 1965, 290-297

TOPIC TAGS: condensation reaction, dihydrazide, sebacic acid

ABSTRACT: The authors have studied the semicondensation reaction of sebacic acid dihydrazide and sebacic acid in m-cresol at 140, 160, and 180C. A method for measuring the rate of the semicondensation reactions between acid hydrazides and dibasic carboxylic acids was worked out. Solutions of dihydrazide and acid are held at the specified temperature for 15 minutes and are then decanted with active shaking. The beginning of the reaction is taken as the end of the decanting process. The reaction is stopped at any particular moment by pouring the solution into boiling benzene of 10 to 15 times the volume. The reaction components precipitate quantitatively and are filtered off and washed. The filtrate is then boiled with 100-150 ml of water for 15 minutes; 15 ml of 3N HCl is then added and the mixture cooled. The polymer sediment is filtered off, washed in water, dried, and weighed. The solution retains the dihydrazide and acid that have not reacted, and also

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L 42146-65

ACCESSION NR: AP5008859

2

retains the dimer. The amount of dihydrazide and dimer may be determined by potentiometric titration with sodium nitrate. It is shown that the semicondensation reaction takes place in two stages, subject to a second-order kinetic equation. The rate of polymer formation is much less than the rate of dimer formation. The difference is pronounced at low degrees of semicondensation. As the chains increase in length, the rate of formation asympotically approaches the value for polymer formation. The difference in rate of formation is apparently due to differences in reactivity of the functional groups of sebacic acid. Orig. art. has: 6 figures, 3 tables, 13 equations, and 2 formulas.

ASSOCIATION: Institut khimii vysokomolekulyarnykh soyedineniy AN UkrSSR (Institute of the Chemistry of High-Molecular Compounds AN UkrSSR)

SUBMITTED: 02Apr64 ENCL: 00 SUB CODE: GC, OC

NO REF SOV: 004 OTHER: 004

Card 2/2 CC

L 22747-66 EWT(m)/EWP(j)/T RM
ACC NR: AP6010114 (A) SOURCE CODE: UR/0190/66/008/003/0490/0498

AUTHORS: Yanchevskiy, V. A.; Grekov, A. P.; Kornev, K. A.

ORG: Institute of Chemistry of High-Molecular Compounds, AN SSSR (Institut khimii vysokomolekulyarnykh soyedineniy AN SSSR)

TITLE: Investigation of ε-caprolactam polymerization in the presence of hydrazides of carboxylic acids

SOURCE: Vysokomolekularnyye soyedineniya, v. 8, no. 3, 1966, 490-498

TOPIC TAGS: carboxylic acid, caprone, hydrazide, polymerization, entropy, kinetic equation, autocatalysis, activation energy, polymerization initiator

ABSTRACT: Polymerization of ε-caprolactam in the presence of hydrazides of carboxylic acids at temperatures of 230-270C has been investigated. In all cases, the reaction was established to be of autocatalytic nature. The kinetics of ε-caprolactam polymerization in the presence of polymerization initiators is described with first-order equations for the reversible reactions. The rate constants, energies, enthropies of activation, and frequency factors were determined. The probable reaction mechanism of ε-caprolactam polymerization in the

Card 1/2 UDC: 66.095.26+678.675

L 22747-66
ACC NR: AP6010114

presence of hydrazides of carboxylic acids was suggested. Orig. art. has: 5 figures, 15 formulas, and 1 table. [Based on author's abstract] [NT]

SUB CODE: 07,11/ SUBM DATE: 05Apr65/ ORIG REF: 013/
OTH REF: 004/

Card 2/2 UVR

DOMBROVSKIY, N.G. professor, doktor tekhnicheskikh nauk, laureat Stalinskoy premii; GREKOV, A.R., inzhener; KRAYTSBERG, M.I., inzhener; LOMAKIN, V.P., inzhener; YARTSEV, G.P., inzhener.

Excavator with an electromagnetic sliding coupling. Mekh. stroi. 12 no.4:16-21 Ap '55. (MLRA 8:6)
(Couplings) (Excavating machinery)

88203

S/020/60/134/002/028/041XX
C 111/ C 333

16.3500

AUTHOR: Grekov, A. V.

TITLE: Dirichlet Problem for Some Quasilinear Parabolic Equations

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 2, pp. 255-258

TEXT: Assume that the curvilinear trapeze D of the (x,t)-plane is bounded by the straight lines $t = 0$, $t = T$ ($T > 0$ and by the continuous curves $x_1 = \varphi_1(t)$, $x_2 = \varphi_2(t)$, where $\varphi_1(t) < \varphi_2(t)$ for all $t \in [0,T]$. The boundary part consisting of the parts of $t = 0$, $\varphi_1(t)$ and $\varphi_2(t)$ is called Γ.

A function $F(x,t,u)$ defined on G: $x, t \in \bar{D}$, $|u| \leq M$ is said to belong to the class $C_{\gamma, \gamma/2, \lambda}[G]$ $(0 < \gamma, \lambda < 1)$, if for arbitrary points (x', t', u') and (x'', t'', u'') from G it holds $|F(x', t', u') - F(x'', t'', u'')| \leq K(|x' - x''|^{\gamma} + |t' - t''|^{\gamma/2} + |u' - u''|^{\lambda})$, where $K = \text{const} \geq 0$.

Let $g(x,t)$ be defined on $\bar{D}$. Then it is put $H[g] = \text{l.u.b.} |g(x',t') - g(x'',t'')| / (|x' - x''|^{\gamma} + |t' - t''|^{\gamma/2})$, where $x', t'; x'', t'' \in \bar{D}$; $|g|_{\gamma}^{D} = \text{l.u.b.}_{D} |g| + H[g]$,

Card 1/4

88203
S/020/60/134/002/028/041XX
C 111/ C 333

Dirichlet Problem for Some Quasilinear Parabolic Equations

$$|g|^{D}_{2+\gamma} = \text{l.u.b.}_{D} \left(\sum_{i=0}^{2} |D_x^i g| \right) + \sum_{i=0}^{2} H\left[D_x^i g\right] + |D_t g|^{D}_{\gamma}.$$

Theorem 1: Let 1.) $a(x,t,u) \geq 0$, $\frac{\partial f}{\partial u} \geq \beta = \text{const} > 0$ for $x,t \in \overline{D}$, $|u| < \infty$ 2.) $a(x,t,u) \geq \alpha_0 = \text{const} > 0$, $\{ a, |b|, |f| \} \leq K_1$; $a, b, \partial f/\partial u \in C_{\gamma, \gamma/2 \lambda}[G]$, where G: $x,t \in \overline{D}$, $|u| \leq M = \max_{D} |f(x,t,0)| / \beta$; $K_1 = \text{const} \geq 0$. 3.) $|\varphi_i'(t_1) - \varphi_i'(t_2)| \leq K_2 |t_1 - t_2|^{\delta}$ for $t_1, t_2 \in [0,T]$, $\delta = 1/2 \min(\gamma, \alpha\lambda)$, $K_2 = \text{const} \geq 0$, $0 < \alpha < 1$, $i = 1,2$. 4.) $f[\varphi_1(0), 0, 0] = f[\varphi_2(0), 0, 0] = 0$. Then the problem

(1') $Lu \equiv u_t - a(x,t,u)\, u_{xx} + b(x,t,u)\, u_x + f(x,t,u) = 0$ for $x,t \in \overline{D} \setminus \Gamma$

(2') $u/_{\Gamma} = 0$

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S/020/60/134/002/028/041XX
C 111/ C 333

Dirichlet Problem for Some Quasilinear Parabolic Equations

possesses at least one solution, where $|u|^{D}_{2+\delta} \leq K_3 \left| f(x,t,0) \right|_{\gamma}$, where K_3 = const only depends on K, K_1, K_2, M α_0, δ and on the diameter of D.

Theorem 2: Let 1.) $a(x,t,u) \geq 0$, $h(x,t,u)$, $\partial f / \partial u$ be continuous for $x,t \in \bar{D}$, $|u| < \infty$, where $\frac{df}{du} \geq \beta$ = const > 0

2.) $a(x,t,u) \geq \alpha_0$ = const > 0 for $x,t \in \bar{D}$, $|u| \leq M$. 3.) a, b, f, h, a_n, b_n, f_n, h_n, a_x, h_x, a_t, h_t, a_{xx}, $h_{xx} \in C_{\gamma}$, $\gamma/2, \gamma$ [9]

4.) $|\varphi_i'(t_1) - \varphi_i'(t_2)| \leq K_1 |t_1 - t_2|^{\gamma/2}$, $(t_1, t_2) \in [0,T]$, i=1,2.

5.) $f[\varphi_1(0), 0, 0] = f[\varphi_2(0), 0, 0] = 0$. Then there exists only one solution of $u_t - a(x,t,u)u_{xx} + b(x,t,u)u_x + h(x,t,u)u_x^2 +$ $+ f(x,t,u) = 0$ $x,t \in \bar{D} \setminus \Gamma$; $u|_{\Gamma} = 0$, for which

$$|u|^{D}_{2+\alpha\gamma} \leq K \left| f(x,t,0) \right|^{D}_{\gamma} \quad , \quad 0 < \alpha < 1.$$

Card 3/4

88203

S/020/60/134/002/028/041XX
C 111/ C 333

Dirichlet Problem for Some Quasilinear Parabolic Equations

In theorems 3 and 4 the author gives similar sufficient conditions for the existence of the solutions of

$$u_t = a(x,t,u_x)\,u_{xx} + f(x,t,u,u_x), \quad u|_{\Gamma} = 0$$

and

$$u_t = a(x,t,u,u_x)\,u_{xx} + f(x,t,u,u_x), \quad u|_{\Gamma} = 0,$$

which satisfy the condition $|u|^{D}_{2+\alpha} < K = \text{const}$.

The author thanks O. A. Ladyzhenskaya for the subject.

There are 6 references: 1 Soviet, 4 American and 1 Polish.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet imeni A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)

PRESENTED: May 18, 1960, by V. J. Smirnov, Academician

SUBMITTED: April 1, 1960

Card 4/4

GREKOV, A.V.

Dirichlet problem for some quasilinear parabolic equations. Dokl. AN SSSR 134 no.2:255-258 S '60. (MIRA 13:9)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova. Predstavleno akad. V.I.Smirnovym.
(Differential equations, Partial)

L 16933-66 EWT(1)/EWT(m)/EPF(n)-2/ENA(1) JD/WW

ACC NR: AT6003100 SOURCE CODE: UR/3181/63/000/015/0295/0298

AUTHOR: Kudryashev, L.I. (Professor; Doctor of technical sciences); Veselov, V.P.; Grekov, A.V.

72
69
A+1
21,44,45

ORG: None

TITLE: Use of an EI-12 to solve problems of unsteady state heat conduction in metals with varying thermophysical properties, in the presence of convective and radiative heat transfer

SOURCE: Kuybyshev. Aviatsionnyy institut. Trudy, no. 15, pt. 2, 1963. Doklady kustovoy nauchno-tekhnicheskoy konferentsii po voprosam mekhaniki zhidkosti i gaza (Reports of the Joint scientific-technical conference on problems of the mechanics of liquid and gas), 295-298

TOPIC TAGS: convective heat transfer, radiative heat transfer, heat conduction, metal, integrated electronic device, integration

ABSTRACT: The article gives the details of solutions using an electronic grid type integrator. The problem is stated in the following manner. The symmetrical problem of heat conduction in a sphere reduces to the following system of equations in dimensionless variables, including the differential heat conduction equation

Card 1/2

ACC NR: At6003100

3

$$\frac{\partial\theta}{\partial F_0} = (1+k\Theta)\frac{1}{\rho^2}\frac{\partial}{\partial\rho}\left(\rho^2\frac{\partial\theta}{\partial\rho}\right)_\rho \text{ для } 0<\rho<1,\ F_0>0, \qquad (1)$$

with the boundary condition of the third order

$$-\left(\frac{\partial\theta}{\partial\nu}\right)_w = \alpha^*(\Theta_w)\Theta_w \text{ для } F_0>0 \qquad (2)$$

and the initial condition

$$\theta = 1;\ \text{для } 0\leqslant\rho\leqslant 1;\ F_0 = 0, \qquad (3)$$

where $\theta = \Theta(\rho, F_0)$ is the analog of the dimensionless temperature; F_0 is the Fourier number; w is the boundary of the sphere; ν is a normal to the sphere; and

$$\alpha^*(\Theta_w) = (a_1 f + a_2 f^2 + a_3 f^3 + a_4 f^4)\Theta_w;\ f = \sqrt{1+k\Theta_w} - 1,$$

$k,\ a_1,\ a_2,\ a_3,\ a_4$

are variable parameters. A table shows results of calculation based on use of an EI-12 grid integrator compared to a solution using an IPT-5 machine. The results agree in a satisfactory manner. Orig. art. has: 9 formulas, 1 figure, and 1 table.

SUB CODE: 09,20,12/SUBM DATE: 00/ ORIG REF: 002

Card 2/2

GREKOV, B., Physician

Author of article, "Bathing in Rivers and Lakes," which appears under the subtitle, "Advice of the Doctor." Sovetskaya Armiya, Group of Soviet Forces, Germany, 24 Jul 54

SO: SUM 291, 2 Dec 1954

GRECKOV, B. N.

GRECKOV, B. A.
(# 310)

Clin. Acad. of Mar Med. Bilateral neurinoma of the acoustic nerve. Report of a case Vop. Neirokhir. 1951, 1 (43-44)

(VIII, 11)

SO: [illegible] Vol. 5 No. 3 Sec. VIII March 1952

GREKOV, B.A.

Results of oral experiments with persons over 70 years of age. Trudy LIETIN no.16:136-147 '64.

Formation and transformation of speech stereotypes in persons over 70 years of age. Ibid.:148-159

Characteristics of the higher nervous activity in old age as revealed by data of the motor-speech method. Ibid.: 160-168

Some regularities of memory changes in old age. Ibid.: 169-177 (MIRA 19:1)

1. Leningradskiy nauchno-issledovatel'skiy institut ekspertizy trudosposobnosti i organizatsii truda invalidov.

GRIGOV, D., Cand Tech Sci--(dis) "Study of optimum parameters of the heat system of an electrostation with high and ultrahigh initial parameters and intermediate steam overheating." Len, 1959. 21 pp (Min of Higher Education USSR. Mos Order of Lenin Power Engineering Inst), 150 copies (KL,31-58,102)

GREKOV, D. [Grecov,D.]

Studies on the determination of the optimum pressure of the intermediate steam superheating in high-power heating and power plants. Rev electrotechn energet 5 no.1:179-199 '60. (EEAI 10:4)
(Heating plants) (Electric-power plants)
(Steam turbines)

GREKOV, D.

Determination of the distribution of temperatures of regenerative heating of feed water in modern thermal electric-power plants with intermediate overheating of steam. Rev electrotechn energet 6 no.1: 125-136 '61.

(Feed-water heaters) (Electric-power plants)
(Steam)

L 14927-63 EPF(n)-2/EWT(m)/BDS AFFTC/ASD/AFWL/SSD Pu-4 DM

ACCESSION NR: AP3003985 S/0089/63/015/001/0076/0077

AUTHOR: Grekov, D.

TITLE: Temperature computation for regenerative water heating in a double-contour atomic electrostation

SOURCE: Atomnaya energiya, v. 15, no. 1, 1963, 76-77

TOPIC TAGS: atomic electrostation, optimal temperature, peaceful application nuclear energy

ABSTRACT: Referring to an older paper of the author (Rev. electrotechn, et energetique 5, no. 2, 1960, 423), this paper presents some thermodynamic considerations for the optimal temperature of the regenerative heating of water in nuclear reactors for use in electric stations. The heat-evolution capacity of the reactor is assumed constant. Two cases are being considered: (i) the vapor pressure in a thermodynamic cycle is constant; the temperature of the heat transferring substance changed on entering the reactor; (ii) the temperature does not change, but the vapor pressure does. The solutions are given in general forms of thermodynamic functions, such as the change of entropy, enthalpy, etc. No numerical examples are given. Orig. art. has: 9 equations.

Association: Rumanian-Soviet Scientific Inst., Academy of Sciences, RNR, Bucharest

Card 1/1

GREKOV, D. [Grecov, D.]; IORDAKE, I. [Iordache, I.]

Radiation of natural gas lighting flames. Rev electrotechn energet 9 no.3:415-426 '64

GREKOV, D.I., inzh.

Effect of elevated temperatures and continuous load on the properties of reinforced plastics. Energomashinostroenie 7 no.10:45-48 O '61. (MIRA 14:10)
(Reinforced plastics)

BERSHTEYN, V.A., inzh.; Prinimali uchastiye: KRASIL'NIKOVA, B.I., inzh.; NOVIKOVA, Ye.V., inzh.; LAV[illegible]V, A.V., inzh.; CRAKOV, D.I., inzh.; KITAYCHIK, V.A., inzh.; GLIKMAN, L.A., prof., doktor tekhn. nauk; SUPRUN, L.A., kand.tekhn.nauk, nauchnyy red.; CIRUMEL, P.I., kand.tekhn.nauk, otv.red.

[Stress-rupture strength and creep of glass-reinforced plastics for use as shipbuilding material.] Dlitol'naia prochnost' i polzuchest' stekloplastikov kak sudostroitel'nykh materialov. Leningrad, Izd-vo "Morskoi transport," 1963. 92 p. (Leningrad. TSentral'nyi nauchno-issledovatel'skii institut morskogo flota. Trudy, no. 53) (MIRA 17:6)

1. Sotrudniki TSentral'nogo nauchno-issledovatel'skogo kotloturbinnogo instituta imeni Polzunova (for Crakov, Kitaychik).

GREKOV, D.I., inzh.; PERKATOV, A.I., inzh.; KITAYCHIK, V.A., inzh.; SEKRETAR', V.P., inzh.

Prospects of using synthetic materials in the manufacture of boilers. Teploenergetika 11 no.3:28-32 Mr '64.
(MIRA 17:6)

1. TSentral'nyy kotloturbinnyy institut.

L 63504-65 EPF(c)/EPR/EPA(s)-2/EWP(j)/EWP(k)/EWT(d)/EWT(m)/EWP(h)/T/EWP(l)/EWA(d)/
ACCESSION NR: AT5010252 EWP(v) Pc-4/Pf-4/Pr-4/Ps-4/ UR/0000/65/000/000/0023/0026
Pt-7 WW/RM/GS

AUTHOR: Grekov, D. I.

TITLE: Grips for short-term and prolonged testing of glass-reinforced plastics for tensile strain

SOURCE: Mashiny i pribory dlya ispytaniya metallov i plastmass (Machines and instruments for testing metals and plastics); sbornik statey. Moscow, Izd-vo Mashinostroyeniye, 1965, 23-26

TOPIC TAGS: material strength, tensile strength, tensometer, tensile stress, fiberglass/ UIM 12 machine, UIM 5 machine

ABSTRACT: Three types of grips were developed for testing glass-reinforced plastics under tensile strain. Two of the grip types were made for use with the testing machine UIM-5 (TsKTI), and a third type was designed for machine UIM-12 (TsNIITMASh). Diagrams of the three types of grips are shown; the diagram for Type I is given on Fig. 1 on the Enclosure. The Type I grip consists of a cylindrical core 2 having two bushings 5 with V-shaped wedges. Two inclined sidepieces 4 slide along the wedges and hold the specimen by means of internal fluted surfaces. The initial grip is established by means of the disk-shaped lining 3 and the elongator 1 which also

Card 1/3

L 63584-65

ACCESSION NR: AT5010252

links the specimen with the tension-generating machine. Type I is intended for holding flat specimens and is recommended for use with specimens no greater than 10 mm wide. The author describes the functioning of the Type I grip and notes that the grip has the disadvantage of being difficult to install. However, it performed successfully in tests at room temperature and at 150C, for extended periods of time. The Type II grip is easier to install and is recommended for use at high temperatures with specimens described in GOST 4649-55.15 Tensometers of the Aistov system were used in evaluating the tendency of each grip to transmit forces centrally. It was noted that stretching of the outer fibers deviated from the mean by no greater than 0.8%. The Type III grip is designed for short-term testing and can be fitted and removed quickly. Tests performed with the Type III grip were also successful, and the grip is recommended additionally for creep testing. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 15Dec64 ENCL: 01 SUB CODE: MT

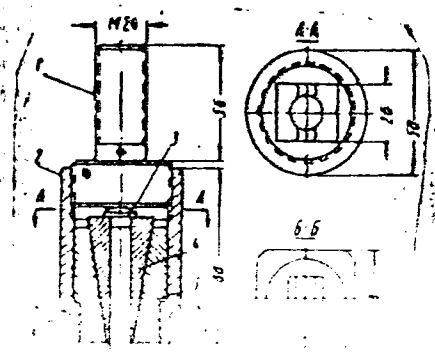
NO REF SOV: 000 OTHER: 000

Card 2/3

L 63[illegible]

ACCESSION NR: AT5010252

ENCLOSURE: 01



GREKOV, G.M.

25(1) PHASE I BOOK EXPLOITATION SOV/2931

Konferentsiya po voprosam rascheta, konstruirovaniya i issledovaniy zubchatykh peredach i peredach gibkoy svyaz'yu. Odessa, 1957

Raschet, konstruirovaniye i issledovaniye peredach: trudy konferentsii...; vyp. 3 (Design, Construction, and Analysis of Gears and Flexible Transmissions: Transactions of a Conference on Problems in Design, Construction, and Analysis of Gears and Flexible Transmissions, No. 3) Odessa, Izd. Odesskogo politekhn. in-ta, 1959. 124 p. 3,000 copies printed.

Sponsoring Agencies: Odesskiy politekhnicheskiy institut, and Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Odesskoye oblastnoye pravleniye.

Ed.: I. P. Nikiforov, Engineer; Editorial Board: L. S. Borovich, Candidate of Technical Sciences; M. S. Belyayev, Engineer; M. D. Genkin, Candidate of Technical Sciences; K. I. Zablonskiy, (Resp. Ed.) Candidate of Technical Sciences; F. S. Zak, Candidate of Technical Sciences; Ya. G. Kistyan, Candidate of Technical Sciences; V. N. Kudryavtsev, Doctor of Technical Sciences; V. P. Maltsev, Candidate of Technical Sciences; and F. S. Polotskiy, Candidate of Technical Sciences; Tech. Ed.: L. B. Erlikh, Candidate of Technical Sciences; A. R. Komissarenko.

PURPOSE: This book is intended for design engineers in the machine-building and automotive industries, particularly gear designers.

COVERAGE: The technical papers contained in this book were originally presented at a conference on gear design held in Odessa in 1957. A number of papers deal with the causes of failure in modern gear drives under such severe service conditions as seizing and jamming. To determine these causes a study was made of the wear resistance of contact surfaces and the rigidity of gear teeth under load. Various gear drive and systems of engagement, including the Novikov-type gears, which are claimed to have many superior characteristics, and the double-envelloping type of worm gear drive are compared. A study is made of the rigidity of gear drives, particularly the rigidity of splined gear-to-shaft joints. A number of gear-testing methods and devices are also listed. No personalities are mentioned.

GREKOV, G.M.

Using isothermal hardening techniques for open cast-iron gear wheels. Trudy Od. tekh. inst. 44:23-29 '62. (MIRA 16:12)

1. Rabota vypolnena na kafedre tekhnologii metallov Odesskogo tekhnologicheskogo instituta. Rukovoditel' raboty - doktor tekhn. nauk Mal'tsev, V.S.

GREKOV, I.

Rezonans (Resonance). Moskva, Gosenergoizdat, (1951?) 104 p.

SO: Monthly List of Russian Accessions, Vol. 6, No. 1, April 1953

GREKOV, I.

Rezonans. (Massovaya radiobiblioteka. Pod obshchey redaktsiey ... A. I. Berga. Vypusk 134).
Moscow, Gosudarstvennoe Energeticheskoe Izdatel'stvo 1952. pp. 104, diags.; 20 x 13; white wrappers.

GREKOV, I.A.

Introduction of machine parts made from compressed wood in the enterprises of Shakhterskantratsit Trust. Ugol' Ukr. no.6:26-27 Je '61. (MIRA 14:7)

1. Upravlyayushchiy trestom Shakhterskantratsit.
(Coal mining machinery) (Wood, Compressed)

GREKOV, I.A., gornyy inzh.; ANTIPOV, V.A., gornyy inzh.; YERMOLENKO, A. Ye., gornyy inzh.

Reorganization of mining operations in the mines representing capital assets in an important potentiality for the improvement of technical and economic indices. Ugol' 36 no.8:30-33 Ag '61. (MIRA 14:9)

1. Trest Shakhterskantratsit kombinata Stalinugol' (Donbass).
(Coal mines and mining)

GHEKOV, I.I.; KUPRIYANOV, Petr Andreevich, redaktor.

[Selected works] Izbrannye trudy [Leningrad] Medgiz, 1952, 343 p. (SURGERY) (MLRA 9:5)

SNEZHKO, Ye.A.; GREKOV, I.I.; [illegible]

Age of the Karachay series of the Northern Caucasus. Dokl. AN SSSR 160 no.5:1166-1167 F '65. (MIRA 18:2)

1. Submitted October 17, 1964.

GREKOV, I.I.; MONOT, S.P.

New data on the age of the Amanchatsk series (Northern Caucasus). Dokl. AN SSSR 163 no.6:1443-1445 Ag '65. (MIRA 18:8)

1. Submitted May 5, 1965.

GREKOV, I.M., inzh.; NEKHAY, S.M., inzh.

Pumps used in hydropneumatic safety devices of power presses. Vest. mash. 38 no.10:44-46 O '58. (MIRA 11:11)
(Power presses) (Pumping machinery)

LADYGIN, Vladimir Nikolayevich; GREKOV, I.N., red.; TSYURKO, M.I., tekhn. red.

[Use of industrial methode in construction] Industrializatsiia stroitel'stva. Orenburg, Orenburgskoe knizhnoe izd-vo, 1960. 25 p. (MIRA 14:11)

(Construction industry)

L 46600-66 EWT(m)/EWP(v)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/HM/HW/WB
ACC NR: AP6012584 (N) SOURCE CODE: UR/0314/66/000/004/0027/0029

AUTHOR: Grekov, I. N. (Engineer); Yunger, S. V. (Candidate of technical sciences); Rubenchik, Yu. I. (Candidate of technical sciences); Kofman, A. P. (Engineer); Likhachev, G. F. (Engineer); Bronshteyn, L. M. (Engineer)

ORG: none

TITLE: Production of apparatus from bimetallic sheets obtained by the explosion method

SOURCE: Khimicheskoye i neftyanoye mashinostroyeniye, no. 4, 1966, 27-29

TOPIC TAGS: bimetal, corrosion resistant steel, explosive forming

ABSTRACT: VNIIPTKh in cooperation with the Volgograd Polytechnic Institute (Volgogradskiy politekhnicheskiy institut) and the Volgograd Plant of Petroleum Machinery im. Petrov (Volgogradskiy zavod neftyanogo machinostroyeniya) conducted weldability tests on the bimetal St. 3 + Kh18N9T prepared by the new explosion method, and studied its qualitative characteristics at various stages of construction of experimental industrial equipment weighing up to 20 tons. The metal was found to have a good weldability, and

Card 1/2 UDC: 66.05:621.9—419.002.2

welded structures made of it can be prepared by earlier processes developed for welding bimetals produced by classical methods. Weld joints prepared in this manner were found to have high values of strength and plasticity. In addition to mechanical tests, the weld joints successfully passed tests for intercrystalline corrosion, x-raying, and other checking operations. V. M. Stepanov, V. G. Tugabey, and V. V. Faleyeva took part in this work. Orig. art. has: 2 figures and 1 table.

SUB CODE: 11,4 SUBM DATE: none

GREKOV, K.A.

3618. GREKOV, K.A. Bor'ba S. Prigoraniyem Porchnyevykh Kolyesh Dvigatyelyey Tyethovozov tel I. te 2. M., Transzhyeldorizdat, 1954. 12s. S Chyert. 21sm. (Vsyesoyuz. Nauchissled. In-t zh.-D Transporta. Inform Pis'mo. No. 317) 1,000ekz. Byespl.-Na Obl. Avt. Nye Ukazany-(54-14151zh) 621.431.72-242+ 621.387

SO: Knizhnaya Letopis', Vol. 3, 1955

GREKOV, K.A.

KOKOSHINSKIY, I.G.; TSAREGRADSKIY, V.A.; GREKOV, K.A.

Controlling sticking of piston rings in the D50 engine. Trudy TSNII MPS no 87:133-161 '54. (MLRA 8:3)
(Diesel locomotives)

GREKOV, K.A., inzh.

Chromium plating of diesel locomotives piston rings and cylinder bushings. Zhel. dor. transp. 37 no.8:70-71 Ag '55. (MIRA 12:8)

(Chromium plating) (Diesel locomotives--Cylinders) (Piston rings)

Name: GREKOV, K. A.

Dissertation: Reducing the seizing of piston rings in D50 diesel locomotive engines

Degree: Cand Tech Sci

Defended at

~~Affiliation~~: Min Railways USSR, Moscow Order of Lenin and Order of Labor Red Banner Inst of Railway Transportation Engineers imeni I. V. Stalin

Publication

~~Defense~~ Date, Place: 1956, Moscow

Source: Knizhnaya Letopis', No 51, 1956

GREKOV, K.A., inzhener.

Using piston rings which reduce scorching. Vest.TSNII MPS 15 no.2:55-56 S '56. (MIRA 9:12)
(Piston rings)

ORLKOV, K.A., kand. tekhn. nauk.

Boiling of piston rings in the D50 diesel locomotive engines. Vest. mash. 38 no.4:16-19 Ap '58. (MIRA 11:3)
(Pistons) (Diesel locomotives)

GREKOV, K.A., inzh.

Method of increasing the efficiency of the D50 diesel cylinder-piston group. Elek. i tepl. tiaga 3 no.4:21-22 Ap '59.
(MIRA 12:7)
(Diesel engines)

GREKOV, K.A., kand.tekhn.nauk

Experience in using chrome-plated trapezoidal piston rings in the D50 engine. Vest.TSNII MPS 18 no.1:50-51 F '59. (MIRA 12:3)
(Piston rings)

GAVRILOV, V.I.; LABENETS, V.F.; MASHKEVICH, N.G.; VANYUKOV, S.F.; GREKOV, K.A.

[Model technological charts for growing and harvesting farm crops applicable in working out scientific farming systems and compiling long-range and yearly plans for collective and yearly state farms of Ryazan Province] Primernye tekhnologicheskie karty po vozdelyvaniiu i uborke sel'skokhoziaistvennykh kul'tur dlia ispol'zovaniia pri razrabotke nauchno-obosnovannykh sistem vedeniia khoziaistva, sostavleniia perspektivnykh i godovykh planov ego razvitiia v kolkhozakh i sovkhozakh Riazanskoi oblasti. Riazan', 1960. 169 p. (MIRA 14:6)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina. 2. Rukovoditel' brigady Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Gavrilov). 3. Ryazanskoye oblastnoye upravleniye sel'skogo khozyaystva (for Vanyukov, Grekov).
(Ryazan Province--Agriculture)
(Ryazan Province--Field crops)

GREKOV, K.A., kand.tekhn.nauk

Analyzing causes of damage in the 2D100 diesel air blower and its drive. Vest. TSNII MPS 17 [i.e. 19] no.7:25-28 '60. (MIRA 13:11)

(Blowers) (Diesel locomotives)

GREKOV, K.A., kand.tekhn.nauk

Inspecting the accuracy of the assembly of the 2D100 diesel locomotive blower. Elek.i tepl. tiaga 5 no.12:20-22 D '61. (MIRA 15:1)

(Diesel locomotives--Testing)
(Blowers)

GREKOV, K.A., kand.tekhn.nauk

Improvement of the design of pistons and rings of the 2D100 diesel engine. Trudy TSNII MPS no.230:46-56 '62. (MIRA 15:7)
(Diesel locomotives) (Diesel engines)

GREKOV, K.A., kand. tekhn. nauk

Lengthening the service life of cyclinder bushings. Vest. TSNII MPS 22 no.7:48-49 '63. (MIRA 16:12)

GREKOV, K.A., kand.tekhn.nauk

Use of reconditioned 2D100 diesel engine pistons rejected initially on grounds of the presence of crack nets in the bottom center. Trudy TSNII MPS no.288:93-108 '65. (MIRA 18:10)

26.2311
26.2254

27651
S/024/61/000/004/009/025
E194/E155

AUTHORS: Grekov, L.I., and Favorskiy, O.N. (Moscow)

TITLE: The influence of allowing for the viscosity of the parameters of a magneto-gas-dynamic generator

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1961, No.4, pp. 46-54

TEXT: Analysis of magneto-gas-dynamic generators, in which electric power is generated by interaction between a magnetic field and a moving jet of electrically conducting gas, is usually based on solution of the differential equations of a uniform flow of electrically conducting fluid in a transverse magnetic field. In general, the equations ought to allow for the terminal values of the electrical conductivity of the working medium, for friction, for transfer to the walls, for inlet and discharge losses and others, but many of these values are usually omitted. The present work discusses the influence of allowing for friction on selection of generator parameters. In practical generators it is to be expected that viscosity forces will be commensurate with magnetic forces. The analysis relates to a conduction circuit generator

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The influence of allowing for the ...

because it is simpler than the induction type. In considering the generator parameters, the induced magnetic field may be neglected because the magnetic Reynolds numbers are small. The magnetic field is assumed uniform across the section and constant over the length of the duct and the gas electrical conductivity is assumed to be a scalar magnitude, which corresponds to the condition that the frequency of collision between gas particles is much greater than the cyclotron frequency. It is, moreover, assumed that the coefficient of friction is unaffected by the presence of a magnetic field. The analysis relates to air, or combustion products, containing 1% K_2CO_3 to increase the electrical conductivity. It is assumed that this does not alter the thermal and other physical properties of the air. The present work makes no attempt to select the parameters of a magneto-gas-dynamic generator; its only object was to determine the fundamental relationships. Accordingly the absolute values of gas temperature, magnetic induction and particularly the gas pressure, should not be considered as recommended values. The system of differential equations for the flow of electrically conducting gas in a magnetic field, allowing for friction, includes an energy equation,

27651
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The influence of allowing for the ....

a continuity equation, and a momentum equation. From these and from a generalised expression for Ohm's law and an equation of polytropy a number of equations are derived which serve as the basis of the analysis. Altogether these equations include 15 variables of which it is convenient to consider the following seven as independent variables: P_1, P_2 (inlet and outlet pressure), T_1 (inlet temperature), B (breadth), U (gas velocity), D_{cp} (hydraulic diameter), and ℓ (length). The equations may then be used to determine the discharge temperature T_2, the current density j, the electric stress E and the efficiency $\bar{\eta}_n$. The influence of the length on the generator characteristics is first considered. If friction is ignored, it is easily shown that increasing the length of the generator causes a steady increase in efficiency because the current density decreases, reducing the Joule effect, and thus making the process more nearly adiabatic. However, when viscosity is allowed for, increasing the length of the generator whilst reducing the Joule effect increases the frictional loss. The first factor is most important for short lengths and the second for great. Thus there is an optimum length of generator from the standpoint of efficiency. The calculation

Card 3/ 4

The influence of allowing for the .... of this maximum efficiency in particular cases is explained. Consideration of the specific powers as functions of length shows that there are certain generator lengths below which useful power cannot be developed. This follows from the application of the generalised Ohm's law. It is also found that the maximum specific power occurs at shorter lengths than correspond to the maximum efficiency. The influence of the inlet pressure on the generator parameters is then considered and it is shown that increase in the inlet pressure reduces the efficiency, and has other effects associated with the reduction in the conductivity of the gas and increased viscosity effect with increasing pressure. A study of the influence of temperature on the generator parameters shows that the most effective way of improving the efficiency and reducing the optimum length is to increase the inlet temperature. Increasing the inlet gas pressure increases the optimum length and reduces the maximum possible efficiency. Therefore, in the analysis of the characteristics of combined magneto-gas-dynamic generators and gas turbines, particular attention must be paid to the influence of inlet pressure on the characteristics.

Card 4/5 4

GRIEKOV, L.I.; MOSKVIN, Yu.V.; ROMANYCHEV, V.S.; FAVORSKIY, O.N.

[Basic properties of certain gases at high temperatures; handbook] Osnovnye svoistva nekotorykh gazov pri vysokikh temperaturakh; spravochnik. Moskva, Mashinostroenie, 1964. 39 p. (MIRA 17:5)

GREKOV, M. A.

20847. Grekov, M. A. Travopal' nyye sevooboroty v rayonakh svekloseyaniya.--V ogt: Grekov M. L. Sbornik nauch. Rabot (Vsesoyuz. nauch. --issled. in-t sakhar. srekly.) Kiyev-Khar'kov, 1948, s. 132-51.

SO: LETOPIS ZHURNAL STATEY - Vol. 28, Moskva, 1949.

GREKOV, M. A.

"Types of Grass Seed Mixtures Considered Best for Crop Rotating Farming in Sugar Beet Fields," Agrobiol., No.3, 1949

All-Union Sci.Res.Inst. Sugar Beet Culture, Kiev

GREKOV, M.A.

About agronomist V.P. Tomilov's article "For a constructive solution of problems of crop rotations and the use of land." Zemledelie 5 no.4:54-57 Ap '57. (MLRA 10:6)
(Rotation of crops)

GREKOV, M.A., starshiy nauchnyy sotrudnik

Crop rotations in sugar beet growing regions of the U.S.S.R.
Zemledelie 7 no.8:22-28 Ag '59. (MIRA 12:10)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut sakharnoy svekly.
(Rotation of crops) (Sugar beets)

BUZANOV, I.F.; SAMBUROV, V.I.; YEMETS, G.M.; ORLOVSKIY, N.I.; NEGOVSKIY, N.A.; FEDOROV, A.I.; GREKOV, M.A.; KURBATOV, S.T.; MEL'NICHUK, A.N.; TONKAL', Ye.A.; GORNAYA, V.Ya.; ROZHDESTVENSKIY, I.G.; SIDOROV, A.A.; KUDARENKO, F.F.; BROVKINA, Ye.A.; GELLER, I.A.; DOBROTVORTSEVA, A.V.; VARSHAVSKIY, B.Ya.; KUTSURUBA, N.V.; KUZ'MICH, S.I.; PRESNYAKOV, P.V.; USHAKOV, A.F.; SHEVCHENKO, V.N.; KHUCHUA, K.N.; PETRUKHA, Ye.I.; POZHAR, Z.A.; SHAPOVALOV, P.T.; AREF'YEV, T.I.; GRIGOR'YEVA, A.I., red.; BALLOD, A.I., tekhn. red.

[Sugar beets] Sakharnaia svekla. Moskva, Sel'khozizdat, 1963. 487 p. (MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sakharnoy svekly. 2. Nauchnyye sotrudniki Vsesoyuznogo nauchno-issledovatel'skogo instituta sakharnoy svekly (for all except Grigor'yeva, Ballod).
(Sugar beets)

GREKOV, M.A.

Sugar beet crop rotations. Zemledelie 27 no.11:13-26 N '65. (MIRA 18:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sakharnoy svekly.

S/123/59/000/010/050/068
A004/A001

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 10, p. 164,
38466

AUTHOR: Grekov, N. A.

TITLE: The Use of Supersonic Flaw Detection to Determine the Metal Quality

PERIODICAL: Elektrosila, Vol. 15, 1957, pp. 66-69

TEXT: At the "Elektrosila" Plant, supersonic flaw detection is compulsory for the quality checks of the rotors of all turbogenerators. The feeler displacement over the surface of a forging is mechanized. In order to facilitate the operator's work, a specially designed holder is used for the sound-testing of large-sized forgings on the lathe immediately after the surface grinding. Prior to setting the feeler into the operating position, it is calibrated with the aid of specially made calibration devices with artificial defects, having a diameter of 1.5, 3.0, 6.0, and 12.0 mm. The device is set on maximum sensitivity in order to determine defects of 1.5 mm diameter at a depth of 350 - 400 mm. If defects are detected which are larger than admissible according to the technical specifi-

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S/123/59/000/010/050/068
A004/A001

The Use of Supersonic Flaw Detection to Determine the Metal Quality

cations, the question of the forging being serviceable is decided in every individual case. In order to determine the nature of the defects, radial trepanation of the forging is employed. After a certain experience has been accumulated, it will obviously be possible to conclude on the serviceability of the rotor immediately from the readings of the device, without having to resort to trepanation every time.

I. N. D.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

GREKOV, N. A..

PHASE I BOOK EXPLOITATION 30V/3528

Moscow. Dom nauchno-tekhnicheskoy propagandy

Primeneniye ul'trazvuka v promyshlennosti; sbornik statey (Industrial Use of Ultrasound; Collection of Articles) Moscow, Mashgiz, 1959. 301 p. 8,000 copies printed.

Sponsoring Agency: Obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy RSFSR.

Ed. (Title page): V.F. Nozdrev, Doctor of Physical and Mathematical Sciences, Professor; Ed. (Inside book): G.P. Kochetova, Engineer; Tech. Ed.: V.D. El'kind; Managing Ed. for Literature on Machinery and Instrument Manufacturing (Mashgiz): N.V. Pokrovskiy, Engineer.

PURPOSE: This book is intended for engineers and technicians engaged in the application of ultrasonics in machinery manufacture and in other branches of industry.

COVERAGE: This is a collection of papers read at the first all-Union conference on the use of ultrasonics in industry. Attention is focused mainly on the description of ultrasonic equipment and on the use of ultrasound for the machining of hard materials and for flaw detection. The effect of ultrasound on metal-crystallization processes is also discussed. No personalities are mentioned. References accompany many of the papers.

GREKOV, N.A.; DURNEV, V.D.; SHKATOVA, A.M.

Testing of electrical steel. Zav.lab. 29 no.12:1453-1454 '63.
(MIRA 17:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektromekhaniki, Leningradskiy filial i zavod "Elektrosila".

GREKOV, N.A., inzh.; ZAMYATNIN, M.M., kand. tekhn. nauk; ZIKEYEVA, T.F., inzh.; TOMILOV, M.Ye., inzh.; SHUTOV, I.A., inzh.

Effect of temperature on the mechanical properties of soft solders and copper compounds soldered by them. Vest. elektroprom. 34 no.7:59-63 Jl '63. (MIRA 16:8)

L 23833-65 EWT(m)/EWP(w)/EPF(n)-2/EWA(d)/EPR/T/EWP(t)/EWP(b) Ps-4/Pu-4 JD/WW/JG
ACCESSION NR: AT4045959 S/2563/64/000/234/0069/0074

AUTHOR: Ageyeva, I. N.; Grekov, N. A.; Zamotorin, M. I.

TITLE: The effect of zirconium on the mechanical and electrical properties of aluminum

SOURCE: Leningrad. Politekhnicheskiy institut. Trudy*, no. 234, 1964. Metallovedeniye (Metallography), 69-74

TOPIC TAGS: mechanical property, electrical property, zirconium, aluminum

ABSTRACT: With a view to improving the strength of Al to make it suitable for use in conductors, the authors investigated the mechanical and electrical properties of annealed as well as hardened Al-Zr specimens. All specimens were homogenized at 450C, cold-rolled and forged into 6 mm diam. rods. In quantities of 0.5 to 0.7% Zr improved the strength of annealed and quenched specimens. Their yield point was 7 to 10 kgG/mm^2, the rupture strength 9 to 11 kgG/mm^2 and elongation per unit length 15 to 17%. Electrical resistivity was 3.2 to 3.3· 10^{-6} ohm· cm, electrical conductivity 30 to 31.8 ohm^{-1} cm^{-1} (51 to 53% of the

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ACCESSION NR: AT4045959

electrical conductivity of Cu); thermal coefficient of electrical resistance within a 22 to 100 C range 385 to 464·10^{-5}. Orig. art. has: 3 figures and 4 tables

ASSOCIATION: Leningradskiy politekhnicheskiy institut (Leningrad Polytechnic Institute)

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NR REF SOV: 003 OTHER: 004

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YEVANGULOVA, Ye.P.; GREKOV, N.A., inzh., retsenzent; FOGEL', A.A., kand. tekhn. nauk red.

[Quality control of surface hardening] Kontrol' kachestva poverkhnostnoi zakalki. Izd.3., ispr. i dop. Pod red. A.A.Fogelia. Moskva, Mashinostroenie, 1965. 46 p. (Bibliotechka vysokochastotnika-termista, no.5) (MIRA 19:1)

L 04631-67 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6010099 (N) SOURCE CODE: UR/0129/66/000/003/0060/0062

42
B

AUTHORS: Arkovenko, G. I.; Grekov, N. A.; Lyapicheva, N. F.; Sazonova, T. N.

ORG: none

TITLE: Relaxation of tensions in titanium alloys, as a function of hot deformation conditions

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 3, 1966, 60-62

TOPIC TAGS: titanium alloy, metal grain structure, metal deformation / VT3-1 titanium alloy, VT-14 titanium alloy

ABSTRACT: The influence of temperature and degree of deformation on the relaxation of tensions in the titanium alloys VT14 and VT3-1 was studied. The chemical composition, the usual mechanical properties, the grain size and grain structure, and the microstructure of the alloys were investigated. The experimental results are presented in graphs and tables (see Fig. 1). It was found that the deformation of alloys VT3-1 and VT-14 specimens in the β-region leads to a formation of coarse grains and to a decrease in the relaxation stability. Lowering the deformation temperature to the $(\alpha+\beta)$-region yields, upon deformation, a more homogeneous structure and leads to an increase in the relaxational stability. The alloy VT14 is more sensitive to hot deformations than is alloy VT3-1.

Card 1/2 UDC: 669.245:539.371

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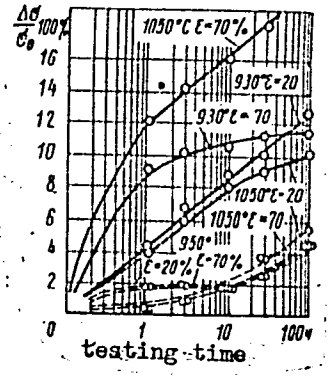
ACC NR: AP6010099

Fig. 1. Relaxation of tensions (for cylindrical specimens) at 100C and $\sigma_0 = 0.65\sigma_{0.2}$ for VT3-1 and $\sigma_0 = 0.70\sigma_{0.2}$ for VT14 as a function of the testing time, heating temperature during forging, and degree of deformation during final heating stage: dashed curve alloy VT3-1; solid curve - alloy VT-14.



Orig. art. has: 2 tables and 3 graphs.

SUB CODE: 11/ 13/ SUBM DATE: none

awm

Card 2/2

GREKOV, N.N.

Distr: 4E3d/4E3c/4E4b/4E4c

5
4

538.122.08 : 537.533 : 621.384.6 621.317.42

6032. MEASUREMENT OF THE FIELD OF MAGNETS OF ACCELERATORS WITH STRONG FOCUSING.

N.N.Grekov, A.P.Ryabov and L.L.Gol'din.

Pribory i Tekh. Eksper., 1958, No. 5, 44-47. In Russian.

A method of measurement of a time-varying magnetic field with an almost constant gradient is described. Special coils, which enable the gradient of the magnetic field at the centre of the coil to be measured directly, and an integrator with a stabilised zero, were used. The results were read from an oscillograph. The method measured the magnetic field configuration to an accuracy of 0.03%. The high sensitivity of the apparatus made possible the study of a number of weak effects, for example, measurement of the field configuration when thin non-magnetic sheets were introduced into the gap.

P.Collins

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E039/E420

AUTHORS: Borisov, V.S., Gol'din, L.L., Goryachev, Yu.M., Grekov, N.N., Ryabov, A.P., Skachkov, S.V., Talyzin, A.N.

TITLE: Measurement of the basic magnetic characteristics of the proton synchrotron C-blocks

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 206-212

TEXT: The ratio of the average field to its gradient $\bar{B}/\nabla\bar{B}$ is measured to an accuracy of 0.1% by an absolute method on a number of C-blocks chosen as standard. A comparison is them made with the other blocks. The apparatus consists of three series of six coils mounted on a marble slab 2 m long and 80 x 27 mm^2 cross-section and is supported on the two geodetic markers on the blocks. Signals obtained from these coils are proportional to the rate of change of the magnetic field at the orbital position and the difference between the inner and outer coils is proportional to the rate of change of the field gradient. Values of $\bar{B}/\nabla\bar{B}$ measured on three separate identical coil systems gave the following results: (1) 68.19 mm; (2) 68.05 mm; (3) 68.28 mm giving a mean value of

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Measurement of the basic magnetic ...

68.17 mm. The measurement was repeated using a "point" method with two coils only, one inside and one outside the equivalent orbit. Values of $B/\nabla B$ were made at 19 points in the blocks and at 8 points between blocks for two coil systems. Comparison of results shows: average of first method 68.19 mm; first "point" method value 68.21 mm, second "point" method value 68.40 mm. The high value for the second "point" method is not accounted for and an average of the first two figures is used in calculations. The distribution of the dynamic component of the field and its gradient in the C-blocks and in the gaps between blocks is measured by a compensation method and the residual field by means of a rotating coil. For a field of 5000 gauss

$$\frac{\overline{\nabla B}_{gap}}{\overline{\nabla B}_{block}} = 0.395 \quad \text{and} \quad \frac{\bar{B}_{gap}}{\bar{B}_{block}} = 0.581$$

Measurements of the dependence of $B/\nabla B$ on the induction are also made. These measurements aid the final choice of the radial distance between the focusing and defocusing groups of blocks and

Measurement of the basic magnetic ...

in determining the basic parameters of the magnetic field correction system. There are 8 figures.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics GKAE)

SUBMITTED: April 11, 1962

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40760

24.6732.

S/120/62/000/004/041/047
E039/E420

AUTHORS: Goryachev, Yu.M., Grekov, N.N., Skachkov, S.V.

TITLE: The effect of the vacuum chamber on the magnetic field in the proton synchrotron

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 217-223

TEXT: All the magnetic measurements made during the assembly of the accelerator were carried out without the vacuum chamber. In order to discover the effect of the chamber on the magnetic field a group of three blocks was set up and arranged with a power supply to simulate a normal working cycle. Two similar vertically orientated measuring coils placed symmetrically with respect to the equilibrium orbit position were used to obtain measurements of the field and its gradient with and without a section of the vacuum chamber (including flanged joints between the blocks). The construction of these coils and the associated circuit is described in detail. The most noticeable distortion of the field occurs in the weak field region, i.e. at the beginning of a cycle. Distortion due to the jointed sections between the blocks is nearly zero at the mid point. Field variations obtained for the

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standard sections and flanged joints are fully tabulated and are found to be small, e.g. average value of the complete field variation due to flanged joints is -0.055 ± 0.006 gauss and for a standard section +0.122 ± 0.032 gauss; the corresponding measurements for the field gradient are +0.0002 ± 0.0010 and 0.0311 ± 0.0055 gauss/cm. The method of inspection for checking the magnetic properties of the chamber sections and their correction by annealing is described. There are 6 figures and 1 table.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics GKAE)

SUBMITTED: March 29, 1962

GREKOV, N.Ye. (Stavropol')

More on visual aids for chemistry. Khim. v shkole 17 no.3:59-60 My-Je '62. (MIRA 15:6)

(Chemistry—Audio-visual aids)